

**AMENDMENTS TO THE CLAIMS WITH MARKINGS TO SHOW CHANGES MADE,  
AND LISTING OF ALL CLAIMS WITH PROPER IDENTIFIERS**

- 1.-5. (Canceled)
6. (Currently amended) A permanent-magnet excited synchronous motor, comprising:
- a stator having a plurality of tooth coils; and
  - a rotor with a plurality of poles interacting with the stator and constructed to dampen both the fifth harmonic and seventh harmonic of the rotor field,
  - wherein at least one of the rotor and stator has a skew of  $3/5$  of a slot pitch with respect to the synchronous motor, and
  - wherein the rotor has a pole coverage of between 85% and 90% of the slot pitch.
7. (Currently amended) A permanent-magnet excited synchronous motor, comprising:
- a stator having with a plurality of tooth coils, and
  - a rotor with a plurality of poles interacting with the stator and constructed to dampen both the fifth harmonic and seventh harmonic of the rotor field,
  - wherein at least one of the rotor and stator has a skew of  $3/7$  of a slot pitch with respect to the synchronous motor, and
  - wherein the rotor has a pole coverage of 80% ( $\pm 10\%$ ) of the slot pitch.
8. (Currently amended) A permanent-magnet excited synchronous motor, comprising:
- a stator having with a plurality of tooth coils, and
  - a rotor disposed for rotation in the stator and having a pole coverage of between 85% and 90% of the slot pitch,

wherein a total skew between the rotor and the stator of  $3/5$  of a slot pitch is apportioned to the stator and the rotor for damping the fifth harmonic and the seventh harmonic of the rotor field.

9. (Currently amended) A permanent-magnet excited synchronous motor, comprising:

a stator having with a plurality of tooth coils, and

a rotor disposed for rotation in the stator and having a pole coverage of  $80\% (\pm 10\%)$  of the slot pitch,

wherein a total skew between the rotor and the stator of  $3/7$  of a slot pitch is apportioned to the stator and the rotor for damping the fifth harmonic and the seventh harmonic of the rotor field.

10. (Previously presented) The permanent-magnet excited synchronous motor of claim 6, wherein the rotor comprises a plurality of permanent magnets and the permanent magnets are arranged or magnetized in an axial direction of the rotor so as to provide a desired rotor skew.

11. (Previously presented) The permanent-magnet excited synchronous motor of claim 10, wherein the permanent magnets are selected from the group consisting of thin plate magnets, ring-shaped magnets and cup-shaped magnets.

12. (Previously presented) The permanent-magnet excited synchronous motor of claim 7, wherein the rotor comprises a plurality of permanent magnets and the permanent magnets are arranged or magnetized in an axial direction of the rotor so as to provide a desired rotor skew.

13. (Previously presented) The permanent-magnet excited synchronous motor of claim 12, wherein the permanent magnets are selected from the group

consisting of thin plate magnets, ring-shaped magnets and cup-shaped magnets.

14. (Previously presented) The permanent-magnet excited synchronous motor of claim 8, wherein the rotor comprises a plurality of permanent magnets and the permanent magnets are arranged or magnetized in an axial direction of the rotor so as to provide a desired portion of the total skew.
15. (Previously presented) The permanent-magnet excited synchronous motor of claim 14, wherein the permanent magnets are selected from the group consisting of thin plate magnets, ring-shaped magnets and cup-shaped magnets.
16. (Previously presented) The permanent-magnet excited synchronous motor of claim 9, wherein the rotor comprises a plurality of permanent magnets and the permanent magnets are arranged or magnetized in an axial direction of the rotor so as to provide a desired portion of the total skew.
17. (Previously presented) The permanent-magnet excited synchronous motor of claim 16, wherein the permanent magnets are selected from the group consisting of thin plate magnets, ring-shaped magnets and cup-shaped magnets.